Fiche Technique de Projet JExcel V4

Fond Du Libre Project Application

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1. Introduction

1.1. Duration and financing of the project :

Project Name	jExcel CE V4
jExcel CE V4 Extension	
Project Call	FDL 01
Project Start Date	01/12/2019
Project length in month	2
Project Cost in k€	10
Planned funding k€	10

1.2. Project Leader

- **Entity : Hodel Technology Ltd**
- **Contact name : Paul Hodel**
- **Contact (mail + phone) : paul.hodel@gmail.com, XXX Phone**

Partners
Industrial
Hodel Technology Ltd

2. General Presentation

2.1. Purpose

The current state of spreadsheet online edition is completely dominated by proprietary or Freemium frameworks. Companies looking for a free and open source solution to develop commercial application could previously use a framework called JQuery.Sheet [RD] . Unfortunately development has stopped in 2016. Since then, a new solution has appeared offering online editing of spreadsheets as free and open source software, called jExcel CE [RD].

jExcel CE is a lightweight vanilla javascript plugin to create web-based interactive tables and spreadsheets compatible with Excel as well as any other spreadsheet software. It is very easy to integrate with web-based software and will transform simple tables/grids into rich, dynamic tables improving the user experience and creating amazing interfaces.

jExcel CE is a javascript software created to facilitate data manipulation in web based applications. It was created to be an easy javascript data input tool for users inspired by Handsontable and Microsoft Excel. This software is free and was created to be a light alternative to Handsontable javascript spreadsheets. Therefor, some keywords in the configuration and initialization directives could be similar to facilitate migration from Handsontable to jExcel CE.

jExcel CE is currently in its third version and the forth one is under active development. The

purpose of this project is to accelerate the development and add compatibility with JQuery.Sheet and HTML tables in general. Adding this particular functionality will allow users of JQuery.Sheet to migrate to jExcel CE and will provide the possibility to edit any standard HTML table - a format used everywhere on the Web.

2.2. Expected Result

jExcel Community Edition v4 is released and adds the following functionnalities:

1. Support workbooks (tabs)
2. Import/export to a collection of HTML <table> (with extra cell metadata in HTML tags for example)
3. Marching ants copying border indication (Highlight the border from cells after CTRL+C)
4. Footer with formula support.
5. Multiple columns resize
6. JSON Support (Helpers to update a remote server)
7. Filter by column
8. Freeze columns
9. Global super event (centralized method to dispatch all events in one). This will be important to help remote data updates from jExcel CE.
10. =PROGRESS (progress bar native method)
11. =RATING (native method for 5 start rating)
12. =COLUMN, =ROW, =CELL (return relative information about the cell inside a formula)
13. Improve the nested header to include dynamic changes based on programmatically requests
14. Richtext native column type
15. Create a new initiation flag to include headers on the data when using CTRL+C (copy)
16. Create more examples using CHARTS (integrating with an open-source third party chart library) and real life examples, such as jExcel CE integrated with Dashboards, etc.
17. Visual dynamic skin design support (Customize colors, and table visual design).
18. New sponsorship section on the website

2.3. Target Market

Providing a functional spreadsheet in HTML5 in as open source and free software will allow a

large variaty of business to display and manipulate data in a convenient way.

- Scientist doing big data analysis in iPython Notebooks ;
- Sales systems requiring to track sale orders and shipments in one page ;
- Factory system requiring to track defects detected during manufacturing ;
- NGO planning its budgets.

In a larger way, any organisation, private or public not able to afford or not willing to purchase a proprietary license for data manipulation online can benefit from jExcel's capabilities.

Hodel Technology Ltd offers and provides support and specific development for companies using jExcel.

2.4. Interest of the funding

This funding will accelerate the development of jExcel CE V4 and will allow to extend the list of functionalities adding such features as the compatibility with HTML tables.

2.5. Strategic Interest of the Project

Online and simple spreadsheet tools are critical for data manipulation in any online system which is rich in data. It is critical to have such a tool as a free and open source software with an extensive range of functionalities available. Without such a tool, companies need to pay for a licence to one of the proprietary framework, use a framework limited in functional scope, or rely on import/export from desktop spreadsheets such as Libre Office or Microsoft Office.

For this project, the online spreadsheet free software editor with the most broad feature scope and the most reactivity has been selected with the idea of creating a major player in spreadsheet edition.

This project will bring double exposure for all entities involved. For jExcel CE as one of the project select by the Fonds de Dotation du Libre (FDL) as the best free software solution for online spreadsheet edition. For FDL as an organisation to finance generic free software tool for the benefit of business, academia, research and developers.

2.6. State of the art

This list only contains free software solutions:

	Licence	Last Updated	Copy/Paste to Spreadsheet	Editable spreadsheet document	Merge Cells	HTML Table I/O	JSON I/O	Enforce Cell/Column Type	Formulae	Worksheet. ie: multiple table	Survive 10.000 x 1.000	Types Columns	Dropdown (with pre-selected values)	Search (Search in Column)	Query: advance search	Sort Column	Drag & Extend ie extend list of values easily	Pivot	Charts
jQuery.sheet [RD]	MIT	9 Nov 2016	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	NA	NA	NA	NA	NA	NA	NA	NA	NA
JExcelCEv3 [RD] (part of JSuites [RD])	MIT	Aug 29, 2019	Yes	Yes	NA	NA	Yes	Yes	Yes	NA	NA	Yes	Yes	Yes	Yes	Yes	NA	NA	NA
dhtmlxSpreadsheet part of dhtmlx [RD]	GPL	March 25 2019	Yes		No												Yes		
dhtmlxPivot part of dhtmlx [RD]	GPL	January 10 2019																yes	
x-spreadsheet [RD]	MIT	Aug 27, 2019		yes	yes			Provide Data Validation	Yes							Yes	Partial	No	No
Slickgrid [RD]	MIT	Sep 2, 2019	Yes	Yes				No			Yes		No	Yes	Yes, but from outside	Yes	No	No	No
OnlyOffice (Render.JS)	N/A	NA	Yes	Yes	Yes	No	No		Yes							Yes			

JS Spreadsheet Table Comparison

More information can be found following these links:

- JSpreadsheets [RD] provides a long list of libraries
- Quora [RD] on JS spreadsheets
- 4+ Free jQuery Spreadsheet Plugins 2019 [RD]

It is often asked which HTML5 spreadsheet would be the most suitable to be integrated in solutions like ERP5, NoteBooks, etc… Up until now the choice wasn't an easy and consequent. For a free software company, if a spreadsheet is available as free software but some of its components are under a different license, it is better avoided. As interesting as the spreadsheet and its functionnalities are, it is not a viable choice for the long run. For instance, consider Handsontable [RD] and their switch from MIT Licence [RD] to a commercial one [RD] between version 6 and 7. In other cases, some feature are available in the community edition while others require a licence. For example, in ag-grid [RD], great filters are available in the community edition, but copy paste is only availble in the entreprise edition.

Excluding these freemium and proprietary solutions, the following represents the spreadsheet that can be used in a free and open source solution :

- JExcel CE v3 [RD]: Good and simple spreadsheet for edititon with a lot of tools. The full suite is an effort to provide web tools in free software. Would be usefull for simple use cases such as displaying Listbox or MatrixBox. The main developer is open to sponsoring of new functionnalities.
- Slickgrid [RD]: Powerful tool to display big tables. Has been used in ERP5 for displaying an SQL table for few years now.

- OnlyOffice [RD]: A gadget is available. This is a heavy duty spreadsheet containing most of the functionnality availble in Excel.
- dhtmlx [RD]: A Freemium spreadsheet suite - but it has a good approach regarding open source software. dhtmlxSpreadsheet for instance doesn't contain any pro feature and is entirely available under the GPLv2 License. To be used if other Free Software frameworks do not meet needs.

2.7. Innovative component of the project and technology locks to be removed

Providing a powerful tool capable of editing HTML5 tables directly can allow for systematic integration within Web Application at a small cost. This innovative element was seen in JQuery.Sheet but has not be available in other solutions. Providing easy conversion from HTML5 table to JSON data format and the reverse will open new possibility in the field of data display and manipulation. Editing HTML5 tables as JSON data in RAM is the major technological lock.

2.8. Positioning and complementarity with other Collaborative Projects

jExcel CE is to be used as an easy and simple Free Software for table / spreadsheet reading and edition. Its functionnalities position it as a tool of choice for other Open Source projects looking for a tool to display and edit data.

3. Detailed work planning

3.1. Management

As the maintainer and developer of jExcel CE, Hodel Technology Ltd takes up the full lead of the project.

3.2. Organisation in sub-projects

SP1: jExcel CE V4

- Integration of functionnalities
- 2 month developer.
- Release of jExcel CE v4 by Hodel Technology Ltd

3.3. Recapitulative Table

Partner	SP1: jExcel CE v4 Release
Hodel Technology Ltd	2 Month

Recapitulative Table of Man Months to be used for each task

Partner	SP1: jExcel CE v4 Release
Hodel Technology Ltd	10k€

Table of Partners' Spendings

3.4. Milestones and Risks

The sole Milestone is the release of jExcel CE v4.

Concerning risks, they reside mainly in the technical difficulties in providing a solution to read and edit HTML tables in jExcel CE.

4. Development Prospects

4.1. Partners Description

Partner n°1	HODEL TECHNOLOGY LTD
Contact	*Paul Hodel [paul.hodel@gmail.com, XXX Phone Number]*
Partner Descritpion	**Paul Hodel has 22 years of experience in commercial development. He is both the software author and the copyright holder.**
Role	**Hodel Technology Ltd is in charge of the technical development of jExcel CE v4**
Industrial and Business prospects	• With the sponsorship, we would expect to grow 20-40% in the next 12 months. The investment will help the launch of jExcel CE (v4), with several new features already on the roadmap and help with the promotion in a few specialized blogs ; • *Releasing jExcel CE v4 with its enriched list of feature will place the solution in unique position. It will provide a list of functionnlities only found in proprietary solutions and it will be the only Free Software solution to do so ;* • *This release will help closing the gap that jExcel CE currently has vis-a-vis proprietary solutions.*
Revenue Prospect	*Thanks to this new postion, jExcel CE will be able to get new customers for support and will generate for the first year a 20k€ benefit.*

Partners Description

4.2. Partners complementarity

Hodel Technology Ltd is an expert in developing frameworks to improve the user experience in web applications. They develop the spreadsheet framework jExcel CE v4.

4.3. Consortium Principle

Each partner remains in possesion of all intellectual property developped or acquired prior to

the project.

Developments undertaken for the project remain the Intellectual property of the partners who produced it.

HODEL Technology continues with full and exclusive intellectual property ownership of jExcel CE. All other partners can use, but do not hold any part of intellectual propriety.

Hodel Technology Ltd will create a sponsors section on the front page of jExcel CE, in the README documentation on GitHub and in our NPM package page, to highlight the FDL sponsorship and how FDL is contributing to the open source software community.

For the duration of the project and for the next five years, partners are bound to not share any confidential information provided by another partner.

5. Annexes

5.1. Success Criteria

5.1.1. Observable Criteria :

- All planned features are released in jExcel CE v4.

5.1.2. Non observable criteria (equally important) :

- A feature reach spreadsheet is available as a free software solution and can be easily integrated by other open source projects.
- jExcel CE is more widely known.
- FDL is mentionned as a major contributor to a succesful project.

5.2. B. Business model

Hodel Technology sell custom developments, integration and support to Business using jExcel. This is one of the standard Business Model for a company developing Free Software Tools. This Business Model has been discussed extensively in the book "Logiciels libres: liberté, égalité, business" by Jean-Paul Smets and Benoît Faucon published by Edispher.